UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,367	04/02/2001	Koji Obata	450100-03146	7171

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EXAMINER
TANG, KAREN C

ART UNIT	PAPER NUMBER
2151	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/824,367	OBATA ET AL.
	Examiner	Art Unit	
	Karen C Tang	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 April 2001</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-11</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-11</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>02 April 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

I. Claims 1-7, and 9-11 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Robinett et al hereinafter Robinett (US 6,351,471) in view of Turudic

et al hereinafter Turudic (US 6,351,471) and Widjaja ("Conditional Overflow Probability

and Profile Curve for ATM Congestion Detection").

1. Referring to Claims 1 and 3, Robinett discloses a data multiplexer for performing time

division multiplexing (TDM: refer to Col 50, Lines 22-46.) of a plurality of bit stream

(refer to Col 2, Lines 1-25), said data multiplexer (refer to Col 1, Lines 55-65)

comprising: an extracting means (refer to Col 9, Lines 46-67) for extracting information

necessary for multiplexing processing (refer to Fig 1 and 2 and Col 2, Lines 13-25) from

each of said plurality of bit stream (refer to Col 1, Lines 55-65 and Col 2, Lines 1-25).

Robinett indicates a separator (refer to Col 3, Lines 1-45) may separate multiplexed

data by a specified method on the basis of said information extracted by said extracting

means, refer to Fig 1 and 2, and Col 9, Lines 46-67.

Robinett does not expressly disclose calculating means for calculating a time division

multiplex cycle.

Turudic indicates a first calculating means for calculating a time division multiplexing

cycle (Cycle: refer to Fig 9, Col 14, Lines 22-45), moreover, Widjaja indicates different

multiplexing cycle equations are being used (8b.1.2, 8b.1.3, 8b.1.4, 8b.1.5)

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to Combine Robinett, Turudic and Widjaja.

The suggestion/motivation for doing so would have been Robinett mentioned in his art

that the Time Division Multiplex is used and the DS3 data and T1 interface are

considered while performing multiplexing. T1capabilities allow the system to be used in

the wildest network.

Robinett indicates a multiplexing means for performing time division multiplexing of said

plurality of bit streams (refer to Col 2, Lines 1-25) on the basis of a result calculated by

said first calculating means (refer to Col 2, Lines 26-67), and Robinett indicates the

importance of try not to let the buffer overflow or underflow (refer to Col 2, Lines 50-67.

Thus, by applying the well-known equation for each cycle of the traffic stream could

prevent traffic from being overflow or underflow, and easy on the traffic congestion.

2. Referring to Claim 2, Robinett discloses a second calculating means for rate of a

virtual data buffer calculating data occupancy of said separator (refer to Col 3, Lines 1-

45), wherein said multiplexing means determines order in which said plurality of bit

stream (refer to Col 2, Lines 1-25) is multiplexed on the basis of the data occupancy

rate of said virtual data buffer calculated by said second calculating means (refer to Fig

1 and Col 4, Lines 41-46).

3. Referring to Claim 4, Robinett discloses a data multiplexer performing time division

multiplexing (refer to Fig 1 and Col 50, Lines 22-46).

Robinett discloses a program for a data multiplexer performing time division multiplexing

(refer to Fig 2 and Col 16, Lines 60-67 and Col 33, Lines 38-67).

Robinett indicates an extracting step for extracting information necessary for

multiplexing processing from said bit stream (refer to Col 2, Lines 1-25, and Col 9, Lines

45-67).

Robinett indicates a separator (refer to Col 3, Lines 1-45) separates multiplexed data by

a specified method on the basis of said information extracted by said extracting means

(refer to Fig 3 and Col 9, Lines 46-67).

Robinett does not expressly disclose calculating means for calculating a time division

multiplex cycle.

Turudic indicates a first calculating means for calculating a time division multiplexing

cycle (Cycle: refer to Fig 9, Col 14, Lines 22-45), moreover, Widjaja indicates different

multiplexing cycle equations are being used ($8b.1.2$, $8b.1.3$, $8b.1.4$, $8b.1.5$)

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to Combine Robinett, Turudic and Widjaja.

The suggestion/motivation for doing so would have been Robinett mentioned in his art

that the Time Division Multiplex is used and the DS3 data and T1 interface are

considered while performing multiplexing. T1capabilities allow the system to be used in the wildest network.

Robinett indicates a multiplexing means for performing time division multiplexing of said plurality of bit streams (refer to Col 2, Lines 1-25) on the basis of a result calculated by said first calculating means (refer to Col 2, Lines 26-67), and Robinett indicates the importance of try not to let the buffer overflow or underflow (refer to Col 2, Lines 50-67. Thus, by applying the well-known equation for each cycle of the traffic stream could prevent traffic from being overflow or underflow, and easy on the traffic congestion.

4. Referring to Claim 5, Robinett discloses the data multiplexer wherein a bit stream is a video stream (refer to Col 2, Lines 1-25).

5. Referring to Claim 6, Robinett discloses the data multiplexer wherein a bit stream is an audio stream (refer to Col 2, Lines 1-25).

6. Referring to Claim 7, Robinett discloses the data multiplexer wherein a bit stream is a system data stream (refer to Col 2, Lines 1-25).

7. Referring to Claim 9, Robinett discloses the data multiplexer wherein said transfer said plurality of bit streams between buffers (refer to Col 4, Lines 40-60).
Robinett does not expressly indicate the method of transfer information.

Widjaja indicates the use of vbv-delay method (congestion is a delay, refer to 8b.1.2, 8b.1.3, 8b.1.4, 8b.1.5).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Robinett and Widjaja.

The suggestion/motivation for doing so would have been Robinett indicates the importance of try not to let the buffer overflow or underflow (refer to Col 2, Lines 50-67). Thus, it is obvious to implement a well-known method (vbv-delay), which can prevent traffic congestion.

8. Referring to Claim 10, Robinett discloses an access unit information detector (60, refer to Fig 4) for extracting access unit information (ReMux, 30, refer to Fig 4); and a multiplexing scheduler (processor, refer to Col 7, Lines 50-67) means for generating schedule information (transport packet to be outputted in a time slot at a particular dispatch time, refer to Col 7, Lines 50-67) by using said access unit information.

9. Referring to Claim 11, Robinett discloses extracting access unit information (ReMux, 30, refer to Fig 4) from an access unit information detector (60, refer to Fig 4); and generating schedule information (transport packet to be outputted in a time slot at a particular dispatch time, refer to Col 7, Lines 50-67) from a multiplexing scheduler (processor, refer to Col 7, Lines 50-67) means by using said access unit information.

II. Claim 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Robinett et al hereinafter Robinett (US 6,351,471) in view of Turudic et al hereinafter

Turudic (US 6,351,471) and further view of Widjaja ("Conditional Overflow Probability

and Profile Curve for ATM Congestion Detection") and Hiuchyj et al hereinafter Hiuchyj

("A second-Order Leaky Bucket Algorithm to Guarantee QoS in ATM Networks").

1. Referring to Claim 8, Robinett discloses the data multiplexer wherein said transfer

said plurality of bit streams between buffers (refer to Col 4, Lines 40-60).

Robinett does not expressly indicate the method of transfer information.

Hiuchyj indicates the use of leaking method (refer to Title).

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to combine Robinett and Hiuchyj.

The suggestion/motivation for doing so would have been Robinett indicates the

importance of try not to let the buffer overflow or underflow (refer to Col 2, Lines 50-67).

Thus, it is obvious to implement a well-known method (leaking bucket), which can

prevent traffic congestion.

Response to Arguments

Applicant's arguments with respect to claims 1-11 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen C Tang whose telephone number is (571)272-3116. The examiner can normally be reached on M-F 7 - 3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on (571)272-3939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

KT

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